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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/034,190 | 12/28/2001 | Sanchaita Datta | 3003.2.10B | 7737 |

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EXAMINER

TRAN, PHILIP B

ART UNIT PAPER NUMBER

2155

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,190

Applicant(s)

DATTA ET AL.

Examiner

Philip B Tran

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. In view of the Appeal Brief filed on 08/03/2004, PROSECUTION IS HEREBY REOPENED. New office action is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Noted that, claims 1-17 are pending.

Claim Rejections - 35 U.S.C. § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 6-9 and 11-16 are rejected under 35 U.S.C. § 102(e) as being anticipated by Zisapel et al (Hereafter, Zisapel), U.S. Pat. No. 6,665,702.

Regarding claim 1, Zisapel teaches a connection-sensitive domain name resolution device, comprising:

a data component identifying IP addresses for at least two paths to a server which has a domain name (i.e., identifying IP addresses for at least two paths to each server) [see Figs. 3A-5] ; and

a code component which receives a domain name resolution request specifying the domain name, selects an IP address from the data component based on information about the status of a path to the server, and supplies the selected IP address in response to the domain name resolution request (i.e., selecting an IP address based on information about the status of a path to the server by implementation of load balancer for fail-over management and routing packets to the servers) [see Figs. 3A-5 and Col. 9, Lines 15-25and Col. 17, Lines 6-67].

Regarding claim 2, Zisapel further teaches the connection-sensitive domain name resolution device of claim 1, wherein IP addresses in the data component identify routers on paths to the server (i.e., IP addresses paths to the server), and the code component avoids selecting the IP address of a router that is on a path to the server but is not available (i.e., balancing the load among the three ISPs for incoming connections and in the event that the router indicated as first choice for connection is unavailable or overloaded, then a second choice router is used) [see Col. 17, Lines 6-17].

Regarding claim 3, Zisapel further teaches the connection-sensitive domain name resolution device of claim 1, wherein IP addresses in the data component identify

routers on paths to the server (i.e., IP addresses paths to the server), and the code component selects the IP address in a round-robin manner by selecting the next IP address in a list of IP addresses of routers that are on paths to the server and are available when the selection is made (i.e., round-robin approach can be used by DNS to resolve IP addresses and in combination with a fail-over management scheme to select IP address and load balance requests across the ISPs) [see Col. 1, Lines 24-35 and Col. 17, Lines 6-17].

Regarding claim 4, Zisapel further teaches the connection-sensitive domain name resolution device of claim 1, wherein the code component selects the IP address of an under-loaded path, thereby tending to balance the loads on the paths to the server (i.e., a fail-over management scheme recognizes when connection is unavailable or overloaded, then balancing the loads on another path to the server is carried out) [see Col. 17, Lines 6-17].

Regarding claim 6, Zisapel further teaches the connection-sensitive domain name resolution device of claim 1, in combination with a router for the server, the router having multiple connections to the Internet (i.e., the Internet connection to the server through ISPs and routers) [see Abstract and Figs. 3B-5].

Regarding claim 7, Zisapel further the connection-sensitive domain name resolution device of claim 1, in combination with a server-sensitive domain name

resolver, wherein the combination performs load-balancing over server paths and also performs load-balancing over multiple servers [see Figs. 1A-5 and Col. 1, Lines 24-67 and Col. 9, Lines 14-25 and Col. 15, Line 57 to Col. 16, Line 15].

Claim 8 is rejected under the same rationale set forth above to claim 1.

Claim 9 is rejected under the same rationale set forth above to claim 2.

Regarding claim 11, Zisapel further teaches the method of claim 8, further comprising the step of pinging a router on a path to the server to determine if the router is a reliable connection component (i.e., polling connection statistics) [see Col. 3, Lines 23-35 and Col. 4, Lines 45-52].

Claim 12 is rejected under the same rationale set forth above to claim 4.

Claim 13 is rejected under the same rationale set forth above to claim 1.

Claim 14 is rejected under the same rationale set forth above to claim 11.

Claim 15 is rejected under the same rationale set forth above to claim 3.

Claim 16 is rejected under the same rationale set forth above to claim 4.

Claim Rejections - 35 U.S.C. § 103

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Zisapel, U.S. Pat. No. 6,665,702.

Regarding claim 5, Zisapel does not explicitly teach the connection-sensitive domain name resolution device of claim 1, wherein the device is placed between the server and a router for the server. However, this is a matter of engineering choice to implement the placement of DNS in the network in such an arrangement that DNS is located between the server and router. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to alter the arrangement and locate the DNS elsewhere in the network while the DNS in combination with the fail-over management scheme still performing selection of IP address and load balance requests across the routers and ISPs to the servers [see Col. 9, Lines 14-25 and Col. 17, Lines 6-17].

6. Claims 10 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Zisapel, U.S. Pat. No. 6,665,702 in view of Mogul, U.S. Pat. No. 6,262,987.

Regarding claim 10, Though Zisapel does suggest TTL in the process of polling and determining connection status [see Zisapel, Col. 3, lines 23-54]. Zisapel does not explicitly teach the method of claim 8, further comprising the step of adjusting the time-to-live to be associated with a DNS record for an IP address in a path to the server. However, Mogul, in the same field of Internet communication using DNS endeavor, discloses updating time-to-live (TTL) associated with the DNS record [see Mogul, Abstract and Col. 1, Line 35 – Col. 2, Line 10 and Col. 4, Lines 19-32 and Col. 6, Lines 10-50]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to set a DNS record time-to-live (TTL) because it would have enabled the prevention of DNS cache miss due to TTL expiration which may result in a time-consuming reload [see Mogul, Col. 1, Line 35 – Col. 2, Line 10].

Claim 17 is rejected under the same rationale set forth above to claim 10.

Other References Cited

7. The following references cited by the examiner but not relied upon are considered pertinent to applicant's disclosure.

A) Zisapel, U.S. Pat. No. 6,249,801.

B) Narendran et al, U.S. Pat. No. 6,070,191.

C) Joffe et al, U.S. Pat. No. 6,185,619.

D) Yu, U.S. Pat. No. 6,078,943.

E) Sridhar et al, U.S. Pat. No. 6,098,108.


F) Okano et al, U.S. Pat. No. 6,725,253.

8. A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS ACTION IS SET TO EXPIRE THREE MONTHS, OR THIRTY DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. FAILURE TO RESPOND WITHIN THE PERIOD FOR RESPONSE WILL CAUSE THE APPLICATION TO BECOME ABANDONED (35 U.S.C. § 133). EXTENSIONS OF TIME MAY BE OBTAINED UNDER THE PROVISIONS OF 37 CAR 1.136(A).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Tran whose telephone number is (571) 272-3991. The Group fax phone number is (703) 746-7239.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam, can be reached on (571)-272-3978.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.


Philip B. Tran
Art Unit 2155
Nov 23, 2004